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**FIXTURE WITH MEANS TO ADAPT THE
POSITIONS OF LOADING LEDGES**

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Technical Field

The present invention concerns a fixture to be used for formation of unit loads on loading ledges.

10 The fixture is intended for use in stockrooms, store-rooms, warehouses, factories etc. It is possible to use in any situation where a unit load is to be formed and placed on loading ledges. The fixture is mainly intended for use in manual formation of the unit loads.

15 As used in this description the term "unit load" refers to one or more packages held together as one unit and received on loading ledges.

Prior Art

20 A unit load consists of one or more packages. Normally the packages are of the same size, but it is also possible to have packages of different sizes. The outer form of the unit loads may vary, depending on the actual packages or the like forming the unit load in question.

25 Thus, the packages forming the respective unit loads may have varying size, form and content.

Today it is common to place packages on (loading) pallets for transportation, storage etc. The pallets are normally of a standardised size. That means that the space occupied in storerooms etc. is dictated by the size of the pallets, even though the packages received on the pallets may demand less space as such. By using loading ledges the occupied space is based on the sizes of the packages and not a pallet. However, as loading ledges are loose parts,

35 i.e. they cannot stand on their own, there is a need for

Fig. 1 is a perspective view of a fixture according to the present invention, indicating one possible placing of a loading ledge;

Fig. 2 is a view corresponding to Fig. 1, indicating
5 an alternative placing of the loading ledges;

Fig. 3 is an end view of the fixture of Figs. 1 and 2;

Fig. 4 is a perspective view from below of a part of the fixture; and

10 Fig. 5 shows examples of different unit loads.

Detailed Description of Preferred Embodiments

The fixture of the embodiment showed in the enclosed Figs. comprises a rectangular frame. The rectangular frame
15 is formed of two struts 1 forming the long sides and two struts 2 forming the short ends. Furthermore, a number of intermediate, short struts 3 are arranged between the long struts 1 to stabilise the frame. In the showed embodiment the short struts 2, 3 are fixed at the lower sides of the
20 long struts 1. In alternative embodiments the long struts and the short struts are placed in the same plane, i.e. on the same level. In this latter case the short sides are fixed to the sides of the long struts. A person skilled in the art realises that the exact design of the frame is of
25 no importance for the present invention as such. Thus, in other embodiments (not shown) the frame has other designs.

On the long struts 1 four transversal bars 4 are received. The number of transversal bars 4 may vary, but there are always at least two bars 4. By means of supports
30 6 the transversal bars 4 are received moveable, i.e. they may slide on the long struts 1. The supports 6 are formed of two legs 11 straddling the sides of the long struts 1. The legs 11 are normally integrated parts of the transversal bars 4, but the supports 6 may be separate units
35 fixed to the bars 4. A person skilled in the art realises

lower side. With the loading ledges 8 placed in line on each long side of the frame and placed on two adjacent bars 4, either unit loads with four loading ledges 8 or two parallel unit loads with two loading ledges 8 may be formed.

5 For smaller unit loads it is possible to form two unit loads at the time in parallel on the fixture, if there are four transversal bars 4. If the number of transversal bars 4 is increased the number of unit loads possible to form in parallel on the fixture is also increased.

10 When the loading ledges 8 are received on two adjacent bars 4, the distance between the bars 4 may be fixed by means of the loading ledges 8. Thus, in such a case no special locking means is needed for the bars 4.

The fixture may be placed on a table giving a suitable height for manually forming unit loads. The table may be adjustable in height in order to give suitable heights during different stages of forming of the unit loads. To adjust the height mechanical linkages, hydraulic or pneumatic cylinders, springs etc. may be used as is well known in the art. Furthermore, the height may be load dependent, i.e. the table sinks automatically as the weight on it increases. It is also possible to have a constant height, i.e. that the upper edge of the uppermost package 12 is kept at a predetermined height. This arrangement facilitates forming of the unit loads, as each package 12 should be delivered at the same height.

In use the transversal bars 4 are moved to and normally locked in positions adapted to the size of the unit load to be formed. It is possible to use only two of the transversal bars 4 at the time, depending on if two or four loading ledges 8 are to be used for the unit load. It is also possible to form two unit loads at the time in parallel as indicated above. Furthermore, the moveable cups 5a are moved and locked to give the loading ledges 8 proper positions for forming a unit load. The positions of the